

## **REMARKS**

Claims 1, 4-5, 18-20 and 22 are pending in the present application, claim 21 having been canceled herein. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

Claims 20 and 22 were rejected under 35 U.S.C. §112, second paragraph. The Examiner asserted that it was unclear whether claim 20 was meant to be a combination of the osteotome and drive connector and whether claim 22 was meant to be a combination of the starter drill and the osteotomes. Claim 20 has been amended to specifically state that the drive connector is in combination with the osteotome of claim 19, and claim 22 has been amended to make clear that the starter drill is a subcombination. Withdrawal of these rejections is respectfully requested.

The drawings were objected to because the quadrangular section of the starter drill was not shown. New Figures 9A and 9B are enclosed. The specification has been amended to refer to those figures. No new matter has been added. Withdrawal of this objection is respectfully requested.

Claims 1, 4-5, 18-20 and 22 were rejected under 35 U.S.C. §103 as being unpatentable over various prior art references. Claim 21 has been canceled and the rejection related to this claim is rendered moot. Specifically claims 1, 4-5 were rejected as being unpatentable over Lorenzi in view of Danger, Lazzara et al, Misch, all of record, and Hollander et al, newly cited, claim 18 was rejected as being unpatentable over Lorenzi in view of Hollander et al, claims 19-20 were rejected as being unpatentable over Lorenzi in view of Hollander et al and Lazzara et al, and claim 22 was

rejected as being unpatentable over Lorenzi in view of Danger. These rejections are respectfully traversed for the following reasons.

Claim 1 recites a kit of instruments to aid the fixing of dental implants that include a plurality of atraumatic bone osteotomes of progressive diameters engageable to a motor-driven connector or a manual-drive connector. The osteotomes (4A, 4B, 4C, 4D) each have an apical end (10) followed by a threaded conical section (9) and a threaded cylindrical section (8), with the threaded cylindrical section capped by an adjustment area (7) in which connectors (14, 17) are engaged. The kit of instruments each comprise a starter drill (1) for piercing the hardest outer layer of a bone during oral surgery before using one or more osteotomes, the starter drill (1) having a quadrangular-section drilling end that is smaller in section than the osteotomes, and an end (6) for engagement to a surgical motor. The kit of instruments also includes at least two additional drills (2, 3) of different diameters that have ends for connection to a surgical motor, and which are used alternatively with the osteotomes. The connectors of the kit of instruments are either a first connector (14) for the motor-driven operation or a second connector (17) for the manual-drive operation of the osteotomes which has a different cross-sectional shape than that of the first connector. The adjustment area (7) of the osteotomes have a polygonal-section projection (13), which is capped by a cylindrical projecting section that includes a circular recess in which an O-ring seal (11) is housed. Both the first connector and the second connector (14, 17) each have an end having a blind axial recess (12) with a polygonal section in which is engaged the

polygonal-section projection (13) of the osteotomes and the O-ring seal (11) that retain the connectors. This is not taught, disclosed or made obvious by the prior art of record.

The Lorenzi patent discloses rotary osteotomes that are fully tapered, *i.e.*, do not comprise a cylindrical threaded section and a conical threaded section (see the Abstract for example). This is considered the state of the art by the Applicant (in the present invention the Applicant states that fully cylindrical-threaded-sectioned rotary osteotomes and fully conical-threaded-sectioned rotary osteotomes are known, see page 2A, lines 7-10). The present invention claims a combination of a cylindrical threaded section and a conical threaded-section, which is new and unobvious with respect to Lorenzi.

Further, the Examiner is not correct when she asserts that Lorenzi comprises a "starter drill having an end section that is smaller in section than the osteotomes and an end for engagement to a surgical motor" (paragraph 31). Paragraph 31 refers to pilot drills 24 and 25, which are not "starter drills" as claimed by the present invention but rather match the "additional drills" of the present invention. The starter drill of the present invention is a sort of spike "for piercing the hardest outer layer of a bone during oral surgery before using one or more osteotomes", claims 1 and 22. The phrase "for piercing the hardest outer layer of a bone during oral surgery before using one or more osteotomes," already in claim 22, has been added to claim 1 to enhance this difference between the starter drill of the present application and pilot drills 24, 25 of Lorenzi.

Danger does not disclose a starter drill with a quadrangular section (claims 1 and 22) because the drill shown in Danger is not a starter drill (for piercing the outer bone layer) but rather a regular drill (for drilling a cavity in the inner bone layers once the outer layer is pierced). The shape shown in Fig. 2 of Danger is also NOT a quadrangular. It is more complex, having more than four inner angles.

The Examiner states that the feature claimed in claim 1 "the adjustment area (7) of the osteotomes have a polygonal-section projection (13), which is capped by a cylindrical projecting section that includes a circular recess in which an O-ring seal (11) is housed" is disclosed by Lazzara. However, Lazzara (Fig. 12) does not show a rotary osteotome but rather an impression coping component 110 that couples to an implant 140 by screw 128. Further, Applicant respectfully submits that there is no reason to combine Lazzara with the remaining prior art to render the claimed feature obvious.

Hollander refers to a dental irrigation *drill* which has absolutely nothing to do with a rotary osteotome for widening a bone cavity in order to make it large enough to receive a dental implant (claims 1 and 18). The Examiner is mentioning Hollander only to try to prove that a conical section followed by a cylindrical section was known in the art. However a drill having such drilling sections does not act or function in the same way as an osteotome that is used to widen a cavity. Thus the asserted modification of Lorenzi by Hollander is misdirected, and would not have been obvious to one of ordinary skill in the art. Furthermore, the particular claimed configuration does

Appln. No. 10/526,187  
Amdt. dated September 17, 2009  
Reply to Office action of May 17, 2009

have significance as pointed out specifically in the previous response by Applicant, see the last paragraph of page 7 of the response of February 28, 2009.

For at least these reasons, Applicant respectfully submits that independent claims 1, 18, and 22 are patentable over the prior art of record whether taken alone or in combination as proposed in the Office Action. Claims 4-5 and 19-20 are believed to be patentable in and of themselves and as they depend from and for the reasons discussed above with respect to claims 1 and 18.

In view of the above amendment and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record. Applicant submits that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

If the Examiner has any questions, he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

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